


MEMORANDUM

TO: Members of the House Health Policy Committee

FROM: Paul A. Long 
Vice President, Public Policy

DATE: 21 March 2006

RE: Testimony of Richard M. Doerflinger related to House Bills 4900-4901

The attached testimony entitled, "Human Cloning and Embryonic Stem Cell Research after Seoul: Examining Exploitation, Fraud, and Ethical Problems in the Research" was delivered by Richard M. Doerflinger on behalf of the U.S. Conference of Catholic Bishops before the Subcommittee on Criminal Justice, Drug Policy and Human Resources of the House Committee on Government Reform.

The testimony examines the scientific, political and moral lessons to be drawn in light of the human cloning scandal in South Korea. I believe this should prove helpful to your discernment on the topic of human cloning and embryonic stem cell research.

Please feel free to contact me should you have questions regarding this matter.

Thank you.

**Testimony of Richard M. Doerflinger
on behalf of the
U.S. Conference of Catholic Bishops
before the
Subcommittee on Criminal Justice, Drug Policy and Human Resources
House Committee on Government Reform
March 7, 2006**

**“Human Cloning and Embryonic Stem Cell Research after Seoul:
Examining Exploitation, Fraud, and Ethical Problems in the Research”**

I am Richard M. Doerflinger, Deputy Director of the Secretariat for Pro-Life Activities at the U.S. Conference of Catholic Bishops. I also serve as Adjunct Fellow in Bioethics and Public Policy at the National Catholic Bioethics Center in Philadelphia. On behalf of the bishops' conference I want to thank this subcommittee for asking us to present our views on cloning and embryonic stem cell (ESC) research in light of the human cloning scandal in South Korea.

Korean researchers led by Dr. Woo-Suk Hwang, the only scientists in the world to convince the scientific community that they had cloned human embryos and derived ESCs from them, are now seen as having perpetrated a massive fraud. An investigative report by Seoul National University and other reports say that, contrary to past disclaimers, the team solicited over a hundred women (often with cash incentives) and even pressured female researchers to provide human eggs for cloning experiments, at serious risk to the women's health; that from over two thousand eggs the researchers failed to produce even one stem cell line despite hundreds of cloning attempts; and that they covered up their failure by falsifying two major articles in a prestigious U.S. science journal.¹

In the United States, reactions to this scandal span a wide spectrum. Some cloning advocates have tried to imply that this event has no implications beyond the malfeasance of a few Korean researchers.² By contrast, a report from Seoul National University says the scandal has “damaged the foundation of science.”³ In our view the truth lies

¹ Seoul National University Investigation Committee, “Summary of the Final Report on Hwang's Research Allegation,” SNU News, January 10, 2006, http://www.useoul.edu/sc_sne_b/news/1196178_3497.html. See also K. Tae-gyu, “Hwang Forced Researcher to Donate Eggs,” *Korea Times*, January 3, 2006, <http://times.hankooki.com/lpage/tech/200601/kt2006010316440911780.htm>.

² “Despite this apparent setback, the field of embryonic stem cell research and therapeutic cloning remains incredibly promising as demonstrated by some of our nation's leading scientists.” Coalition for the Advancement of Medical Research, “Statement of Daniel Perry, President, on Hwang/Schatten Cloning Paper Published in *Science* Magazine, June 2005” (December 15, 2005), www.stemcellfunding.org/camr_news.aspx?rid=121505A. In fact, no scientist has demonstrated that so-called therapeutic cloning is possible in humans, let alone has promise. The word “incredible” may be appropriate here in a way the author did not intend.

³ Quoted in “S. Korea Cloning Research Was Fake,” *BBC News*, December 23, 2005, <http://news.bbc.co.uk/1/hi/world/asia-pacific/4554422.stm>.

somewhere between these extremes. The scandal implicates far more than a few Korean scientists; it does not undermine science in general, unless one foolishly equates human cloning with all of science.

There are scientific, political, and moral lessons to be learned from this debacle.

1. Scientific Lesson: Back to the Drawing Board

The first obvious conclusion to be drawn from the scandal, as noted by the *Washington Post*, is that “the highly touted field of embryonic stem cell research is years behind where scientists thought it was.”⁴ After eight years of effort around the world to clone human embryos, no one has achieved even the first step in using this procedure for human treatments (so-called therapeutic cloning). Supporters’ earlier predictions that such cloning would soon provide a ready source of genetically matched tissues for human clinical use were, to say the least, premature.

It is generally true that a discovery of fraud in one researcher’s claims does not discredit an entire field. But in this case, Dr. Hwang’s studies *were* the field of allegedly successful human cloning for research purposes. If his research is a fraud, there is (at present) nothing left of that field. As the *New York Times* has observed, “The technique for cloning human cells, which seemed to have been achieved since March 2004, now turns out not to exist at all, forcing cloning researchers back to square one.”⁵

This is at least the *third* time in eight years that we have heard announcements of success in cloning human embryos for their stem cells, only to find that the claim has little basis in fact. The two previous false starts were announced by an *American* company, Advanced Cell Technology.⁶ Americans should not look down on South

⁴ A. Faiola and R. Weiss, “South Korean Panel Debunks Scientist’s Stem Cell Claims,” *Washington Post*, January 10, 2006, A9.

⁵ N. Wade and C. Sang-Hun, “Human Cloning Was All Faked, Koreans Report,” *New York Times*, January 10, 2006, A12.

⁶ See J. Cibelli et al., “Somatic Cell Nuclear Transfer in Humans: Pronuclear and Early Embryonic Development,” in *e-biomed: The Journal of Regenerative Medicine* 2.5 (November, 2001): 25–31, <http://earthops.net/human-clones1.pdf>. Although ACT’s researchers only managed to bring one cloned embryo to the six-cell stage and obtained no stem cells, the company announced this as “the first proof that reprogrammed human cells can supply tissue for transplantation.” ACT news release, November 25, 2001, www.sciencedaily.com/releases/2001/11/011126000857.htm. Some news reports were breathless: “Scientists have finally cloned a human embryo. The breakthrough promises cures for terrible diseases.” J. Fischer, “The First Clone,” *U.S. News and World Report*, December 3, 2001, 50. But outside experts judged it a “failure.” G. Kolata, “Company Says It Produced Embryo Clones,” *New York Times*, November 26, 2001, A14. In 1998, ACT said it had created “hybrid” clones by fusing human nuclei with enucleated cows’ eggs, but could not produce plausible evidence of this. “Company ‘cloned human cells,’” *BBC News*, November 13, 1998, <http://newsrss.bbc.co.uk/1/low/sci/tech/213663.stm>. An early report of human embryo cloning from South Korea, in December 1998, also could not be verified. “Did South Korean Doctors Clone Human Embryos?” *Global Situation Report*, February 10, 1999, www.gsreport.com/articles/art000012.html.

Korean researchers, as though they have a monopoly on misleading hype in this field.

Most Americans, and most legislators, probably assume that there are at least established models for use of ESCs from “therapeutic cloning” in animals. But this is not the case. Some studies published by Advanced Cell Technology and others have been touted as showing benefits from stem cells harvested from cloned *animal* embryos—but in each case, the study had to achieve its therapeutic goal by implanting the embryo in an animal’s uterus and growing it to the fetal stage, then killing the fetus for more developed *fetal* stem cells. Such “fetus farming” is now apparently seen by some researchers as the new paradigm for human “therapeutic cloning,” and some state laws on cloning are crafted to allow just such grotesque practices in humans.⁷

In short, it may be that “therapeutic cloning” cannot be made to work without conducting the “reproductive cloning” that almost everyone condemns—placing embryos in women’s wombs, in this case in order to abort them later for their more developed tissues. This would, of course, also compound cloning’s exploitation of women as egg factories, by exploiting them as incubators for cloned fetal humans as well.

Other claimed advances for ESCs from cloning have turned out to be a “bait and switch” ploy—that is, the advance was falsely reported to have come from cloned embryos, but turned out not to involve cloning at all.⁸ This ploy has even been used in what are generally seen as serious medical journals. Last summer, for example, the *New England Journal of Medicine* reported that “human nuclear-transfer embryonic stem cells” had been shown to produce new neural tissue in an animal model of brain damage.⁹ The articles the author cited for this claim, however, clearly report using existing ESC lines from fertilized embryos—cell lines eligible for federal funds under the current Bush administration policy. The studies even received NIH funding under that policy.¹⁰

⁷ See USCCB Secretariat for Pro-Life Activities, “Research Cloning and ‘Fetus Farming’: The Slippery Slope in Action,” March 18, 2005, www.usccb.org/prolife/issues/bioethic/cloning/farmfact31805.htm.

⁸ When Rep. Dave Weldon (R-FL) said accurately in 2003 that there were no published animal studies showing the benefits of ESCs from “therapeutic cloning,” his remarks were attacked as “asinine” by three pro-cloning scientists. But the studies they cited to rebut him all turned out not to involve cloning, or not to involve ESCs. See “Reality Check: Proof of ‘Therapeutic’ Cloning?” Do No Harm press release, March 10, 2003, www.stemcellresearch.org/pr/pr_2003-03-10.htm.

⁹ A. Perry, “Progress in Human Somatic-Cell Nuclear Transfer,” *New England Journal of Medicine* 353.1 (July 7, 2005): 88. The article also hailed Dr. Hwang’s research as showing that use of ESCs from human cloning is a “viable clinical proposition” (87). It concluded, “While the United States remains rooted in atavism, Hwang and coworkers have shown that Asia is moving forward.” *NEJM* ceased to be a credible journal in this field in July 2003, when it announced a new politically motivated editorial policy of specially “seeking out” manuscripts touting ESCs. “We want to be sure that legislative myopia does not blur scientific insight,” wrote the editor, myopically. J. Drazen, “Legislative Myopia on Stem Cells,” *New England Journal of Medicine* 349.3 (July 17, 2003): 300.

¹⁰ A. Perrier et al., “Derivation of midbrain dopamine neurons from human embryonic stem cells,” 101.34

What are the broader implications for human ESC research in general? That depends on whether cloning is essential for future use of ESCs in therapies. The Biotechnology Industry Organization testified to Congress in 2001 that cloning *is* essential, and on that basis opposed any complete ban on human cloning.¹¹ If BIO was right in 2001—and apparently it still thinks so, since the organization and its state affiliates continue to oppose complete human cloning bans and even to fight for public funding for so-called therapeutic cloning—then ESCs have been discredited as a route to therapies, at least for the time being. If BIO was wrong, and cloning is (in the words of one recent overview) “a boutique science, one at the fringe of the rapidly expanding world of stem cell biology,”¹² why not ban the egregious abuse of human cloning now and debate the other issues relating to ESC research separately?¹³

In this context we should note that many stem cell experts had been expressing grave doubts about the feasibility of large-scale “therapeutic cloning” even before the Hwang research was exposed as a fraud.¹⁴ The latest news only confirms these doubts.

To be sure, other avenues for obtaining genetically compatible tissues for human therapies from ESCs also pose formidable practical as well as ethical problems. Certainly no scientist seriously believes that the current supply of “spare” embryos frozen in fertility clinics is adequate for any clinical use.¹⁵

Proceedings of the National Academy of Sciences (August 24, 2004): 12543-8; V. Tabar et al., “Migration and Differentiation of Neural Precursors Derived from Human Embryonic Stem Cells in the Rat Brain,” *Nature Biotechnology* 23.5 (May 2005): 601-6.

¹¹ “Somatic cell nuclear transfer research is essential if we are to achieve our goals in regenerative medicine.... However, this is precisely the research that would be banned by the Weldon bill.” Testimony of Thomas Okarma on behalf of the Biotechnology Industry Organization against H.R. 1644, “Human Cloning Prohibition Act of 2001,” House Energy and Commerce Subcommittee on Health, June 20, 2001, <http://energycommerce.house.gov/107/hearings/06202001Hearing291/Okarma450.htm>.

¹² R. Monastersky, “A Second Life for Cloning,” *Chronicle of Higher Education*, February 3, 2006, A16.

¹³ A recent *New England Journal of Medicine* commentary, for example, fights against “the impression that stem cell biology has been discredited” by the Hwang scandal, arguing that cloning by somatic cell nuclear transfer “plays only a minor role in the wider discipline of stem cell biology.” E. Snyder and J. Loring, “Beyond Fraud—Stem-Cell Research Continues,” *New England Journal of Medicine* 354.4 (January 26, 2006):322-323. The journal’s editor had said exactly the opposite in 2003, claiming that by approving a ban on human cloning the House of Representatives had voted to “ban research on, and the use of, medical treatments derived from embryonic stem cells.” Drazen, “Legislative Myopia,” 300.

¹⁴ Many of these experts’ quotes are compiled in USCCB Secretariat for Pro-Life Activities, “Practical Obstacles to ‘Therapeutic’ Cloning,” November 4, 2004, with more recent updates, www.usccb.org/prolife/issues/bioethic/cloning/clonprob11404.htm.

¹⁵ One widely cited study estimates that there were as many as 400,000 frozen embryos in fertility clinics as of April 2002. However, that study also found that 2.8 percent (or about 11,000) of those embryos were designated for possible use in research. Destroying all those embryos solely to obtain stem cells (deemed by the authors a “highly unlikely” scenario) might produce a total of 275 cell lines. D. Hoffman et al.,

Some propose creating genetically diverse “banks” of embryos produced by fertilization, in an attempt to provide a close genetic match to most patients. Two prominent researchers say that merely determining the “best options for research” (to say nothing of treatments) would require “perhaps 1,000” stem cell lines—about four times as many as are now available nationwide.¹⁶ Others say that to reflect the genetic and ethnic diversity of the American population, an ESC bank geared toward treating any major disease must include cell lines from many embryos *created solely in order to be destroyed for those cells*—including a disproportionate number of specially created embryos from African-American couples and other racial minorities, who are underrepresented among fertility clinic clients.¹⁷ Yet other stem cell researchers say “millions” of embryos from fertility clinics may be needed to create cell lines of sufficient genetic diversity.¹⁸ Is anyone in Congress seriously committed to creating and destroying human embryos on such a massive scale?

In short, supporters of expanded federal funding for human ESC research may have an agenda without an exit strategy. If mass production of ESCs from human cloning poses enormous practical and ethical problems, and the same may be true of efforts to make ESCs “therapeutic” without cloning, no one should assume that ESCs are the Holy Grail of regenerative medicine. As to human cloning research itself, it of course remains possible that someone will solve the seemingly intractable technical problems and manage to make the procedure work; but the prospect of making it “efficient,” separating it from the exploitation of women, and deriving cost-effective therapies from it in our lifetimes seems remote.

2. Political Lesson: No More Free Ride for the Cloning Bandwagon

While many researchers are beginning to appreciate that human cloning for medical research may be a failure, the world of politics is another matter. The political agenda for cloning has long been divorced from the facts, and this problem is, if anything, getting worse. It was *after* the last two years’ “progress” in human cloning research was found to be illusory that a leading Senate advocate declared, “This is probably the most promising medical-health-care scientific research, as far as I’m concerned, in the history of the world.”¹⁹

“Cryopreserved Embryos in the United States and Their Availability for Research,” in *Fertility and Sterility* 79.5 (May 2003): 1068.

¹⁶ S. Hall, “Bush’s Political Science,” *New York Times*, June 12, 2003, A33.

¹⁷ R. Faden et al., “Public Stem Cell Banks: Considerations of Justice in Stem Cell Research and Therapy,” 33.6 *Hastings Center Report* (November-December 2003): 13–27.

¹⁸ R. Lanza and N. Rosenthal, “The Stem Cell Challenge,” *Scientific American* (June 2004): 94. Another recent study, while noting that other solutions to the immune rejection problem might be found, agrees that the creation of a sufficiently diverse bank of ESC lines is “almost impossible.” M. Drukker and N. Benvenisty, “The Immunogenicity of Human Embryonic Stem-Derived Cells,” *Trends in Biotechnology* 22.3 (March 2004): 138.

¹⁹ Sen. Orrin Hatch, quoted in Monastersky, “Second Life for Cloning,” A16.

To win public support and government funding, advocates for human cloning and ESC research have long made hyped claims and exaggerated promises to legislators and the general public. In short, some scientists and science organizations have acted more like snake oil salesmen than scientists, marketing the dream of “miracle cures” around the corner—and people (other than politicians) are beginning to notice.

In 2004, the state of California witnessed an especially cynical and shameless campaign by researchers and venture capitalists to put the state over \$6 billion into debt to fund this research. Only now are voters beginning to realize the truth:

Much of the California electorate was sold last year on the idea that human embryonic stem cells might be turned into amazing cures for incurable diseases, propelling Proposition 71 to easy victory in the Nov. 2004 election. Now, it's increasingly clear that stem cell transplants for diabetes or Parkinson's or Alzheimer's are nowhere close, maybe decades away.²⁰

Leading supporters, afraid of political backlash, have been issuing disclaimers to reduce people's unrealistic expectations about this research's producing cures any time soon. In some cases they are also shifting the blame for those expectations onto others.

British stem cell expert Lord Winston has warned his colleagues that the political hype in support of ESCs and cloning needs to be reined in:

One of the problems is that in order to persuade the public that we must do this work, we often go rather too far in promising what we might achieve. This is a real issue for the scientists. I am not entirely convinced that embryonic stem cells will, in my lifetime, and possibly anybody's lifetime for that matter, be holding quite the promise that we desperately hope they will.²¹

Interestingly, one of Lord Winston's scientific colleagues protested in response that this was not scientists' fault: “It is true that Alzheimer's is not a promising candidate for stem cell therapies, but it was not scientists who suggested it was—that was all politics in the U.S. driven by Nancy Reagan.”²²

But of course, in the United States Mrs. Reagan was backed by scientific groups

²⁰ C. T. Hall, “Stem Cell Leaders to Talk Strategy at Conference,” *San Francisco Chronicle*, September 30, 2005, B4.

²¹ Professor Lord Winston, “Should We Trust the Scientists?” Gresham College Lecture, June 20, 2005, www.gresham.ac.uk/event.asp?PageId=39&EventId=347.

²² Prof. Stephen Minger, quoted in M. Henderson, “Benefits of Stem Cell Research Oversold, Says Expert,” *The Times* (London), September 5, 2005, www.timesonline.co.uk/article/0,,2-1764771,00.html.

who want public funding of ESC research. These groups must have known about the scientific consensus against an ESC therapy for Alzheimer's but chose to ignore it. One expert explained the discrepancy between political message and scientific fact by commenting, "To start with, people need a fairy tale."²³

As the blame game continues, some cloning supporters have even made the hypocritical argument that the Bush administration is to blame for the Korean hoax. Because our government is not "paying for and regulating" ESC research of this kind, they say, the landmark research was done in another country with no safeguards.²⁴

But every part of this argument is demonstrably false. Not only President Bush, but President Clinton and a seemingly unanimous consensus in Congress over the past decade have opposed funding the special creation of human embryos for research purposes.²⁵ Moreover, South Korea did in fact have laws and regulations in place to prevent the most egregious abuses—tighter regulations, allowing more independent oversight, than cloning supporters have built into their Proposition 71 in California—but these were simply ignored by researchers obsessed with reaching their goal.²⁶ In fact, although ethical concerns about Hwang's practices were raised by sympathetic critics in Korea and the United States when he published his 2005 study, U.S. researchers continued to enthuse about collaborating with him right up to the most recent reports of complete fraud.²⁷ To blame "unethical" cloning in Korea on those who warned against

²³ Dr. Ronald McKay, quoted in R. Weiss, "Stem Cells An Unlikely Therapy for Alzheimer's," *Washington Post*, June 10, 2004, A3, www.washingtonpost.com/wp-dyn/articles/A29561-2004Jun9.html.

²⁴ Arthur Caplan and Glenn McGee, "U.S. Must Support, Regulate Stem Cell Research," *Albany Times Union*, November 20, 2005, E1.

²⁵ President Clinton rejected such funding in an executive directive of December 2, 1994. Every year since then, Congress has annually approved a ban on funding any harmful human embryo research; and the only serious effort to weaken that ban, in 1996, would have left in place the funding ban on research involving cloning or other creation of embryos for research. Even the major bills seeking to overturn President Bush's policy on ESC research deal only with "spare" embryos produced by in vitro fertilization, and some of them explicitly state that "the research involved shall not result in the creation of human embryos" (e.g., "Stem Cell Research Act of 2001," H.R. 2059 / S. 723, 107th Congress, 1st session). So this charge against President Bush only underscores how out-of-step the cloning movement is with virtually all federal policymakers.

²⁶ For example, an American bioethics journal published a paper detailing the Korean team's ostensibly careful protocol for ensuring the informed and uncoerced consent of women donating eggs for the research. Unbeknownst to the journal's editors and even the article's authors, however, that protocol was not followed in practice. The journal has now retracted the article. See G. McGee, "Editorial Retraction," *The American Journal of Bioethics* 6.1 (January-February 2006): W33, http://bioethics.net/journal/j_articles.php?aid=913.

²⁷ The issue of *Science* carrying Hwang's 2005 study also published an ethical analysis raising concerns about informed consent, the risks to egg donors who cannot benefit directly from the research, and even the use of the term "therapeutic cloning" to describe research that may be decades away from providing therapies. D. Magnus and M. Cho, "Issues in Oocyte Donation for Stem Cell Research," *Science* 308.5729 (June 17, 2005): 1747–1748, www.sciencemag.org/cgi/content/full/308/5729/1747. Korean ethicist Koo Young-mo raised similar concerns: "Let me raise a worst-case scenario. If some of the donors suffer from ovarian hyperstimulation syndrome and they bring Hwang to court with the dubious consent form, Hwang

doing it at all takes blame-shifting to new depths.

The political lesson from the Korean scandal, and from scandalous behavior here in the United States, is that political leaders, patient advocacy groups, and all of us must stop hearing only what we want to hear about “miracle cures.” We need to be aware of the human costs of this agenda here and now, not only its alleged “promise” down the road. And we need to ask cloning supporters to provide real evidence for their grandiose claims.

3. Moral Lesson: Utilitarianism Is Not Useful

The third and most important lesson is moral.

Researchers, devoted to increasing human knowledge and bettering the human condition, have long been tempted to “cut corners” on ethics, including the ethics of protecting human research subjects, to achieve their admittedly important goals. A founder of modern scientific medicine, Dr. Claude Bernard, cautioned in 1865:

The principle of medical and surgical morality ... consists in never performing on man an experiment that might be harmful to him to any extent, even though the result might be highly advantageous to science, i.e., to the health of others. But performing experiments and operations exclusively from the point of view of the patient's own advantage does not prevent their turning out profitably to science.²⁸

Likewise, in the wake of the grotesque German experiments of the 1940s, the Nuremberg Code insisted, “No experiment should be conducted where there is an a priori reason to believe that death or disabling injury will occur.”²⁹

Researchers in the United States have not always followed this moral principle. We have only to think of the Tuskegee syphilis experiments, the deliberate injection of hepatitis virus into mentally retarded children at the Willowbrook home, and the Cold

may be in trouble.” Quoted in K. Tae-gyu, “Hwang Clones Patient-Specific Stem Cells,” *Korea Times*, May 20, 2005, <http://times.hankooki.com/lpage/200505/kt2005052009202652820.htm>. Yet when Hwang offered to collaborate with U.S. researchers and provide them with ESCs from cloning, researchers like Dr. George Daley of Harvard responded enthusiastically: “Given the access that [the Koreans] apparently have to a very willing set of egg donors, they may be much more efficient at generating these cells than anybody else,” he said. Quoted in S. Okie, “An Offshore Haven for Embryonic Stem-Cell Research?” *New England Journal of Medicine* 353.16 (October 20, 2005): 1647.

²⁸C. Bernard, *An Introduction to the Study of Experimental Medicine* (1865), quoted in S. Post, *Inquiries in Bioethics* (Washington, DC: Georgetown University Press, 1993), 145.

²⁹See “The Nuremberg Code (1947)” *British Medical Journal* 7070: 313 (December 7, 1996): 1448. The Code acknowledges one possible exception to this norm, which if taken absolutely could itself be problematic: “those experiments where the experimental physicians also serve as subjects.” Researchers have a moral responsibility to respect their own lives as well.

War radiation experiments on unsuspecting Americans in the 1950s.

What is new in recent years is the dominance of a “new ethic” that would justify such abuses *in principle*³⁰—a utilitarian calculus that relativizes and demeans human life and other values whenever they may get in the way of the research prize. Tragically, this new ethic of “the end justifies the means” has become virtually the official ethic of those seeking to justify destructive human embryo research and human cloning in both the public and private sectors.

For example, Peter Singer of Princeton University, hailed by some as the most influential ethicist in the world, recently predicted that the old ethic honoring the sanctity of life will effectively be dead by 2040—and that in retrospect, “2005 may be seen as the year in which that position became untenable,” because people realize that a sanctity of life ethic would not allow us to benefit from the wonderful new breakthrough in cloning from South Korea!³¹ Singer is, of course, famous for his logical consistency in realizing that if life is not sacred before birth, it is not sacred afterward either.

Government advisory panels have been forced by the evidence to concede that the early human embryo is a “human life,” because the evidence from embryology has only become more and more persuasive on that point.³² They even concede that this life deserves our “respect.”³³ Instead of concluding that experimental destruction of this life is off limits, however, they have used a cost-benefit analysis to argue that this respect is overridden by the health needs of born persons with devastating diseases.

When a member of the NIH Human Embryo Research Panel asked in 1994 whether the panel should really base its recommendations for federally funded embryo research on the principle that “the end justifies the means,” the panel’s chief ethicist

³⁰ “The traditional Western ethic has always placed great emphasis on the intrinsic worth and equal value of every human life, regardless of its age or condition. This ethic has had the blessing of the Judeo-Christian heritage and has been the basis for most of our laws and much of our social policy.... This traditional ethic is still clearly dominant but there is much to suggest that it is being eroded at its core and may eventually be abandoned.... It will become necessary and acceptable to place relative rather than absolute values on things such as human lives.” “A New Ethic for Medicine and Society,” editorial, *California Medicine* 113.3 (September 1970), reprinted at www.bhhrg.org/CountryReport.asp?ChapterID=148&CountryID=18&ReportID=24&keyword=.

³¹ P. Singer, “The Sanctity of Life,” *Foreign Policy* (September–October 2005): 40.

³² “What is clear,” says one summary of recent findings, “is that developmental biologists will no longer dismiss early mammalian embryos as featureless bundles of cells.” H. Pearson, “Your Destiny, from Day One,” *Nature* 418.6893 (July 4, 2002):15.

³³ The National Institutes of Health Human Embryo Research Panel agreed in 1994 that “the preimplantation human embryo warrants serious moral consideration as a developing form of human life.” *Report of the Human Embryo Research Panel* (Bethesda, MD: NIH, September 1994), x. And in 1999, the National Bioethics Advisory Commission cited broad agreement in our society that “human embryos deserve respect as a form of human life.” *Ethical Issues in Human Stem Cell Research*, vol. I (Rockville, MD: NBAC, September 1999), ii, cf. 2.

quoted the man known as the father of situation ethics, Joseph Fletcher: "If the end doesn't justify the means, what does?"³⁴

As a guide to its ethical approach, the NIH panel cited an article by this ethics co-chair, Prof. Ronald Green of Dartmouth. He argues in this article that there are no realities "out there" in human beings that require us to respect *anyone* as a person. It is the task of the educated and articulate members of society, he wrote, to decide which qualities in others are morally relevant, based on their own enlightened self-interest. If we deny "personhood" or moral worth to too many people, we may risk denying it to ourselves or others we care about; if we bestow it on too many people, we may deprive ourselves and other persons of the benefits of lethal experiments on those people.³⁵

By this approach, if respecting a particular kind of human subject would prevent us from pursuing especially promising research, this is sufficient reason for refusing to respect that individual as a person. This approach turns the Nuremberg Code upside down: The dignity of a human subject will never stop researchers from doing research they think is extremely promising, because the promise of the research justifies defining those subjects out of the community of persons so we can make use of them.

In theory, there are limits to such mistreatment of fellow humans under the New Ethic. In practice, the urge for results tends to swallow up all countervailing values, as it did in Korea. Even NBAC in 1999 conceded that "the derivation of stem cells from embryos remaining following infertility treatments is justifiable only if no less morally problematic alternatives are available for advancing the research."³⁶ But NBAC and its allies ignored the evidence available even then that such alternatives existed; and as stem cells from adult tissues and umbilical cord blood have saved thousands of lives and begun to treat dozens of conditions, they have only become more hardened against giving due attention to this progress.

In short, once one has used the unique medical promise of a certain approach to justify acts that everyone agrees *would otherwise be unethical*, one has a vested interest in resisting any evidence that may rebut that claim of unique promise. The result is that continuing to justify the initial ethically problematic agenda becomes an end in itself. To some U.S. researchers, therefore, the failure of the Korean experiment only means that they themselves *must* make cloning work, regardless of the human cost.

Dr. Michael West of Advanced Cell Technology, for example, says that the Korean fiasco presents a new opportunity for the United States to "take the lead" and

³⁴ Ronald Green, quoted in Proceedings of the NIH Human Embryo Research Panel, Monday, April 11, 1994, transcript, 92.

³⁵ Ronald Green, "Toward a Copernican Revolution in Our Thinking about Life's Beginning and Life's End," *Soundings* 66.2 (Summer 1983): 152-173, cited in NIH, *Report*, 38 note 13.

³⁶ NBAC, *Ethical Issues*, 53.

show this can be done “ethically.”³⁷ But as we have seen, this is the company that made the first two undocumented announcements of success in “therapeutic cloning” in 1999 and 2001; it is the company that now sees fetus farming as a new paradigm for human cloning; and the company’s ethics committee is chaired by none other than Ronald Green, the leading advocate of “end justifies the means” thinking in this field.

Another U.S. researcher, now considering going back into the cloning field, says, “I have to admit that I decided not to push the efforts here at Stanford because it would have been almost unethical to work with human eggs if [Hwang] had made the process so efficient.”³⁸ Consider this logic. Now that Dr. Hwang has shown that you may bribe or pressure over a hundred women to donate over two thousand eggs, and still have nothing to show for it, this failure may make it *ethical* (or more ethical, since it was only “almost” unethical before) to pursue this route ourselves. The need to reach the goal justifies all.

Even the Korean researchers’ willingness to deceive the public about their results is justifiable in principle under the New Ethic. The utilitarian calculus relativizes not only life, but truth as well. The *California Medicine* editorial that hailed the New Ethic in 1970 observed that, since the “old ethic” seeing human life as inviolable had not yet been completely displaced, it was necessary (and therefore, of course, acceptable) to resort to “subterfuge”:

Since the old ethic has not yet been fully displaced it has been necessary to separate the idea of abortion from the idea of killing, which continues to be socially abhorrent. The result has been a curious avoidance of the scientific fact, which everybody knows, that human life begins at conception and is continuous whether intra- or extra-uterine until death. The very considerable semantic gymnastics which are required to rationalize abortion as anything but the taking of a human life would be ludicrous if they were not often put forth under socially impeccable auspices. It is suggested that this schizophrenic sort of subterfuge is necessary because while a new ethic is being accepted the old one has not yet been rejected.³⁹

Cloning advocates have brushed aside moral concerns about human life, and the indignity of creating new lives just to destroy them. Even if human embryos are “lives” in a biological sense, we are told, they do not have the value of persons—and they must be sacrificed to help born patients who really matter. Ironically, born patients (and adult women, exploited for their eggs) have joined embryos in being victimized by this agenda. In any case, we should not be surprised when an ethic that dismisses “Thou shalt not kill” in the quest for cures applies the same calculus to “Thou shalt not bear false witness.” If the embryo’s “merely biological” life can be trampled to benefit more valuable lives,

³⁷ Monastersky, “Second Life for Cloning,” A14.

³⁸ Dr. Irving Weissman, quoted in Wade and Sang-Hun, “Human Cloning Was All Faked,” A12.

³⁹ “New Ethic,” *California Medicine*.

“merely factual” truth can be sacrificed for the higher truth of progress.

While the Hwang scandal itself does not undermine the foundations of science, this ethic—an ethic unfortunately tempting to researchers in this country as well—*does* threaten to undermine those foundations. For science is nothing without an absolute commitment to the facts.

By demeaning life, we learn to demean truth, rendering science itself meaningless. If American ESC researchers have not learned this important lesson, a sound ethical response must come from the broader society and its policymakers. That response should begin with a complete ban on human cloning, and with legislation to prevent the mistreatment of women as egg factories for research or as surrogate incubators for unborn children being grown for their body parts. Only by respecting fellow human beings of every age and condition, and by refusing to treat them as mere instruments for achieving our research goals, will we promote a human progress worthy of the name.